

described in U.S. Pat. App. No. 09/624,715, filed concurrently herewith, entitled "*Process for Recovery of Sulfur From H₂S Using Short Contact Time Partial Oxidation*", the disclosure of which is incorporated herein by reference.

On page 8, please replace the second paragraph (lines 11-20) with the following paragraph:

Typically, the catalyst structure is heated as a result of the exothermic chemical reactions occurring at its surface; however, it can additionally or alternatively be heated by external means, such as electrical resistance, magnetic induction, RF, etc. Heating by external means can allow for increases in the rate at which feed gas can be passed through the catalyst structure while still obtaining desirable reaction products. In many cases it is helpful to heat the catalytic device 24 with external means at least at the start of the process, so as to initiate the exothermic reactions on the catalyst structure. This initial heating can be accomplished in any suitable manner including electrical resistance, magnetic induction, RF, or the like. Once the system is running, it is preferably run adiabatically or nearly adiabatically (i.e., without loss of heat), so as to reduce the formation of carbon (e.g., coke) on the surface of the gauze catalyst.

On page 10, please replace the second and third paragraphs (lines 8-19) with the following:

Accordingly, and referring now to Figure 2, the present system preferably includes the synthesis gas reactor 10, firetube boiler 40, a condenser 50, heater 55, a tailgas cleanup unit 60, a cooler 58, and a quench tower 80. The cooled, partially oxidized gases flow from boiler 40 into condenser 50, where they are cooled further until the dew point of the elemental sulfur is reached. This allows for the removal of elemental sulfur, as desired, from the process. Once the bulk of the elemental sulfur is removed, the partially oxidized gases are reheated in heater 55 and passed

through a tailgas converter unit 60. Each tailgas converter unit 60 includes at least a sulfur absorbing material 56 in contact with the fluid. More specifically, in each converter unit 60, the hot gas stream is passed over a bed of zinc or iron oxide. In this bed, any elemental sulfur is converted to metal sulfide and retained in the bed.

The effluent from the sulfur absorber is then preferably cooled sufficiently in cooler 58 and quench tower 80 to condense the bulk of any remaining water from the gas stream.

In the Claims:

Please replace claim 17 with the following amended claim:

17. (Amended) The system according to claim 8 wherein the catalyst is selected from the group consisting of: platinum, rhodium, iridium, nickel, palladium, iron, cobalt, rhenium, rubidium, Pd-La₂O₃, Pt/ZrO₂, Pt/Al₂O₃ and combinations thereof.

REMARKS

The Examiner's approval of the prepared amendment to Fig. 2 is respectfully requested. The omitted portion of Fig. 2 as originally filed, is extraneous subject matter that is not described in the specification. The specification has been amended to refer to reference number 58 and to recite "cooler 58 and quench tower 80" in conformity with the system shown in Fig. 2, as originally filed and as now amended. A typographical error has also been corrected in the specification by deleting an extraneous "is." Other obvious typographical errors have also been corrected, as indicated in the appended marked-up version of the amendments.

Claim 17 has been amended to correct a typographical error in which "method" was erroneously recited where "system" was intended.